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Claim Amendments:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of forming a superconductive device, comprising:
cleaning a metal alloy substrate tape having a dimension ratio of not less than about 10^2,
the cleaning including immersing the substrate tape in a fluid medium and
subjecting the substrate tape to mechanical waves in the fluid medium;
plasma treating the surface of the substrate tape;
depositing a buffer layer to overlie the substrate tape after plasma treating; and
depositing a superconductor layer to overlie the ~~substrate~~buffer layer.

2. (Original) The method of claim 1, wherein the fluid medium comprises water.

3. (Original) The method of claim 1, wherein the mechanical waves comprise sound waves.

4. (Original) The method of claim 3, wherein the sound waves are ultrasound waves, having a frequency not less than about 20 kHz.

5. (Original) The method of claim 4, wherein the sound waves have a frequency not less than about 100 kHz.

6. (Original) The method of claim 4, wherein the sound waves have a frequency not less than about 200 kHz.

7. (Original) The method of claim 1, wherein the substrate is translated through the fluid medium in a reel-to-reel process.

8. (Original) The method of claim 7, wherein the substrate is translated continuously through the fluid medium while subjecting the substrate to the mechanical waves.

9. (Previously Presented) The method of claim 8, wherein the substrate is translated through the fluid medium at a rate of at least 2 inches/minute.

10. (Previously Presented) The method of claim 9, wherein the substrate is translated through the fluid medium at a rate of at least 10 inches/minute.

11. (Currently Amended) A method of forming a superconductive device, comprising:
polishing a metal alloy substrate tape having a dimension ratio not less than 10^2;
cleaning the substrate, cleaning including immersing the substrate tape in a fluid medium and subjecting the substrate tape to mechanical waves in the fluid medium;
plasma treating the surface of the substrate tape;
depositing a buffer layer to overlie the substrate tape after plasma treating; and
depositing a superconductor layer to overlie the ~~substrate~~buffer layer.

12. (Original) The method of claim 11, wherein polishing includes reducing a surface roughness of at least one side of the substrate through a series of successive polishing operations.

13. (Original) The method of claim 11, wherein polishing is carried out by contacting the substrate with an abrasive slurry, and applying a force against the substrate to effect material removal.

14. (Original) The method of claim 1, further comprising a step of executing a high pressure rinse prior to cleaning.

15. (Previously Presented) The method of claim 1, further comprising exposing the substrate to an annealing step after cleaning and prior to depositing.

16. (Original) The method of claim 15, wherein annealing is carried out at a temperature of at least 400°C.

17. (Original) The method of claim 15, wherein annealing is carried out in a non-oxidizing environment.

18. (Original) The method of claim 17, wherein the non-oxidizing environment is a reducing environment, containing a reducing gaseous component.

19. (Original) The method of claim 17, wherein the non-oxidizing environment comprises an non-reactive gas.

20. (Original) The method of claim 15, wherein the annealing is effective to reduce defects along a surface of the substrate.

21. (Original) The method of claim 15, wherein the annealing is effective to remove impurities along a surface of the substrate.

22. (Previously Presented) The method of claim 1, wherein plasma treatment is carried out at a pressure between 10^{-2} to 10^{-5} Torr.

23. (Previously Presented) The method of claim 1, wherein the plasma treatment is effective to remove impurities along a surface of the substrate.

24. (Canceled)

25. (Currently Amended) The method of claim 1[[24]], wherein the buffer layer includes at least one film that is biaxially textured.

26. (Original) The method of claim 25, wherein the biaxially textured layer film is formed by an IBAD process.

27. (Original) The method of claim 1, wherein the superconductor layer has a Tc not less than about 77K.

28. (Original) The method of claim 27, wherein the superconductor layer comprises YBCO.

29. (Original) The method of claim 1, further comprising depositing a stabilizer layer overlying the superconductor layer.

30. (Original) The method of claim 1, wherein the superconductive device is a superconductive tape.

31. (Original) The method of claim 1, wherein the superconductive device is an electric power component incorporating a superconductive tape comprising said substrate and superconductor layer.

32. (Original) The method of claim 1, wherein the substrate has first and second opposite major surfaces, at least the first opposite major surface being polycrystalline and randomly textured, the first opposite major surface being directly exposed to the cleaning medium during cleaning.

33. (Previously Presented) The method of claim 32, wherein the superconductor layer overlies the first major surface.

Claims 34-38 (Canceled)

39. (Previously Presented) The method of claim 1, wherein plasma treating is carried out while translating the substrate through a plasma chamber.

40. (Currently Amended) A method of forming a superconductive device, comprising:
polishing a metal alloy substrate tape having a dimension ratio not less than 10^2;
cleaning the substrate tape, cleaning including immersing the substrate in a fluid medium and subjecting the substrate to mechanical waves in the fluid medium;
translating the substrate tape through a plasma chamber and into a deposition chamber;
plasma treating the substrate tape while translating through the plasma chamber; and
depositing at least one film of a buffer layer on the substrate tape while translating through the deposition chamber.